

PTO/SB/08A (07-05)
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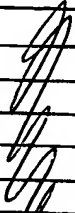
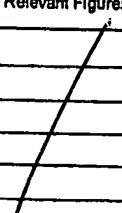
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Complete if Known

Application Number	10/615,552
Filing Date	07/08/2003
First Named Inventor	Ian Robert Appelbaum
Art Unit	2815
Examiner Name	Jerome Jackson, Jr.
Attorney Docket Number	129-001

U. S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
		US- 6154475	11/28/2000	Soref	
		US- 6031273	2/29/2000	Torok	
		US- 5973334	10/26/1999	Mizushima	
		US- 5432373	7/11/1995	Johnson	
		US- 5334854	8/2/1994	Ono	
		US- 5079774	1/7/1992	Mendez	
		US- 4800415	1/24/1989	Simmons	
		US- 4710936	12/1/1987	Shibata	
		US- 4473834	9/25/1984	Soclof	
		US- 2002/0085332	7/4/2002	Ide	
		US- 6340826	1/22/2002	Iliadis	
		US- 6493196	12/10/2002	Noma	
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FOREIGN PATENT DOCUMENTS						
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		Country Code ³ Number ⁴ Kind Code ⁵ (if known)	MM-DD-YYYY			
		JP61270885A	12/1/1986	Mori		
		DE3225630A1	1/12/1984	Preissner		
		JP06-163983	6/10/1994	Jlee Kee Towainamu		
		JP01-185968	07/25/1989	Yamada Toshishige		
		JP61-231788	10/16/1986	Mori Yoshihiro		

Examiner Signature		Date Considered	7/106
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of

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NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		MONSMA, DJ, et al, Perpendicular Hot Electron Spin-Valve Effect in a New Magnetic Field Sensor: The Spin Valve Transistor, Physical Review Letters, Vol 74, no. 26 6/26/95	
		MARCO MASTRAPASQUA, et al, Light emitting charge injection transistor with p-type collector, Appl. Phys. Lett. 60 (19), 11 May 1992	
		MARCO MASTRAPASQUA, et al, Light emitting Transistor Based on Real-Space Transfer: Electrical and Optical Properties, IEEE Trans on Elect. Dev. vol 40, No. 2, Feb 1993	
		G.L. BELENKY et al, Collector-up light-emitting charge injection transistors in n-InGaAs /InAlAs/p-InGaAs and n-InGaAs/InP/p-InGaAs heterostructures, J.Appl.Phys.73(12) 6/15/93	
		J. GENOE, pnp resonant tunneling light emitting transistor, Appl. Phys. Lett. 61 (9) 31 August 1992	
		LUDMILA BAKUEVA et al, Multi-layer contacts for organic light-emitting diodes w/ enhanced injection effic., Organic optoelectronic Materials, MRS, SC Moss, Ed, v. 708, 2002	
		YIPING HE et al, Hybrid magnetic tunnel junction/vertical cavity surface emitting laser field sensor device, Electronics Letters, 11/22/01 vol. 37, no. 24	
		X. JIANG, et al, Optical Detection of Hot-Electron Spin Injection into GaAs from a Magnetic Tunnel Transistor Source, Phys Rev Let., V 90, No. 25, 27 June 2003	
		IAN APPELBAUM et al, Ballistic electron emission luminescence, Applied Physics Letters, Vol 82, No. 25, 23 June 2003	
		IAN APPELBAUM et al, Experimental test of the planar tunneling model for ballistic electron emission spectroscopy, Physical Review B 67 155307 (2003) 10 April 2003	

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NON PATENT LITERATURE DOCUMENTS

[illegible]

Examiner Signature	<i>Chackov</i>	Date Considered	7/06
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1 Applicant's unique class designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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